



Hidden Valley Lake Fisheries Management Report April 2002

Hidden Valley Lake is a 61-acre Department-owned impoundment situated atop Clinch Mountain in Washington County, Virginia. At normal pool elevation (3,600 feet MSL), the reservoir has a maximum depth of 24 feet and a mean depth of 14 feet. Hidden Valley Lake was formed in 1963 when a smaller dam was renovated and upgraded by the Department. From 1963 to 1979 the reservoir was managed as a put-grow-and-take fishery for brook trout. During the mid-1970's, unauthorized stockings of rock bass and golden shiners altered the fishery, and brook trout introductions were soon discontinued. Adult smallmouth bass were stocked in 1979 and 1980 to control the rock bass and shiner populations. From 1984 to 1988 balanced populations of rock bass, redbreast sunfish (unknown source), and smallmouth bass provided quality fishing opportunities.

The lake was completely drained in November 1988 to facilitate repairs to the primary spillway structure and the emergency spillway. Repairs were completed the following spring, and the lake began filling on July 17, 1989. Efforts to re-establish the fishery began in July 1989. The fish community that became established in the 1990's did not provide very good fishing opportunities. Smallmouth were scarce, less than five per hour when sampling, and redbreast sunfish were over-abundant and stunted at a small size.

Fish stocking has been particularly important as a management tool for Hidden Valley Lake in recent years. Biologists are attempting to re-structure the lake's fish community by stocking largemouth bass and bluegill sunfish. Largemouth and bluegill should reproduce in the lake and establish self-sustaining populations. Channel catfish and Northern pike are stocked into the lake each year, because the lake does not have sufficient spawning habitat for these species.

The current bass regulation is an 18-inch minimum length limit, with a one bass per day creel limit. A 30-inch minimum length limit and two fish per day creel limit is in effect for northern pike. Statewide daily creel limits are in effect for sunfish (50), and crappie (25). These regulations are in place to prevent overharvest.

Current fisheries management objectives for Hidden Valley Lake are to increase abundance and size of largemouth and smallmouth bass, to reduce the abundance of redbreast sunfish and to maintain the black crappie population at a level that provides reasonable numbers of quality size (8 inches) fish. In order to achieve these objectives biologists stock fish as needed, enhance fish habitat, and monitor the fish populations by routine sampling.

Several fish habitat improvements are planned for Hidden Valley Lake in the future. Brush shelters, "slab-habs" (structures built using sawmill slabs) and hinge trees will be added to enhance existing habitat in the lake. Aquatic vegetation is beginning to present some problems. Submerged aquatic vegetation provides very good habitat for fish as long as it does not "take over". Biologists are monitoring the situation and are stocking grass carp periodically as a means of controlling the vegetation.

Fish populations at Hidden Valley Lake are sampled each year in May using boat-mounted electrofishing gear. Fish collected during these population surveys are measured, weighed and released back into the lake. Sampling time is recorded in seconds so that the relative abundance (number of fish collected per hour) can be determined. Biologists get important information about the size structure of the population by looking at the length data. The abundance and size structure data allow biologists to compare the current sample collection to past results, and to the results of samples collected at other lakes.

The fish populations at Hidden Valley Lake have changed considerably since the last report was submitted in 1999. Although the fishery has not improved to the point that biologists are content, there are some definite signs of improvement. Largemouth bass catch rates have tripled since 1999. Bluegill are nearly twice as abundant as they were in 1999. Smallmouth catch rates have remained fairly steady. More importantly, redbreast sunfish catch rates have declined from 125 per hour in 1999 to 20 per hour in 2001. Most of these fish populations still do not have a desirable size structure. There are some large individuals available for anglers, but the majority of the fish are small. This is to be expected as the lake's fishery is in a re-building stage.

The biggest fisheries concern at this time is the black crappie population. Black crappie were introduced by an un-authorized source in the mid-1990's. The population is rapidly becoming over-abundant. Catch rates have increased from 97 per hour in the 1999 sample to 181 per hour last year. The overall size structure of the crappie population is not good; over 90 percent of the crappie are less than 8 inches long. Biologist hope that black crappie size structure will improve as populations of largemouth bass and northern pike grow in size and abundance, and offer some means of controlling this over-abundant population.

In summary, the fishery at Hidden Valley Lake offers anglers good opportunities to fish for small and medium-sized crappie, but below average opportunities for bass and sunfish at this time. Catfish and northern pike are present and should provide some angling diversity.

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